

## AMENDMENTS TO THE SPECIFICATION

Please enter the attached paper copy form of Sequence Listing to replace the Sequence Listing filed on July 2, 2007.

Please replace table 3 on page 23 with the following amended table:

**TABLE 3**  
**MODIFICATIONS IDENTIFIED IN THE HUMAN LENS CRYSTALLIN**

Modification <sup>a</sup>	Nominal Mass Shift <sup>b</sup>	Present invention/ Peaks Identified Sites <sup>c</sup>	ProteinLynx/ AutoMod Identified Sites <sup>d</sup>	Example Present invention Alignment <sup>e</sup>
N-Terminal Carbamylation	43	12	7	NYR( L )VVFLENFQGRRAE (SEQ ID NO:1) x       ([156.1])VVFLENFQGR (SEQ ID NO:2)
Methylation of Cysteine	14	4	0	GRR( YD )(Cc)D(Cc)DCADFHTYLSRCNS       XX      (SEQ ID NO:3) ([278.1])(Cc)D(Cc)TMADFHTYLSR (SEQ ID NO:4)
N-Terminal Acetylation	42	2	2	MDIAIHH(PW)IRRPF (SEQ ID NO:5) x:       SSNLALHH(APD)LR (SEQ ID NO:6)
Formation of Pyroglutamic acid	-17/-18	2	0	VKVQDDFVEIHGKHNE (SEQ ID NO:7) :x      EPDFVELHGK (SEQ ID NO:8)
Formation of Succinimide	-17	1	1	NYRLVVFLENF( Q )GRRAE (SEQ ID NO:9)      x    LVVFELEPF([128.1])GR (SEQ ID NO:10)
N-Terminal Acetylation and Oxidation of Methionine	42 and 16	1	0	MD( V )TI( Q )HP( W )FKRTL (SEQ ID NO:11) x          ([403.2])TL([128.1])HP([186.1])FK

Please replace paragraph [0035] on page 7 with the following amended paragraph:

Figure 6 illustrates an embodiment of the present invention where, for each local alignment, all possible combinations of the next three masses in each sequence (database SEQ ID NO:12 versus de novo SEQ ID NO:13) are compared sequentially with a breadth-first search algorithm.

Please replace paragraph [0036] on page 7 with the following amended paragraph:

Figure 7 illustrates an embodiment of the present invention where a *de novo* sequence (SEQ ID NO:14) generated by Peaks from one MS/MS spectrum aligns to bovine serum albumin (SEQ ID NO:15) with significant homology.

Please replace paragraph [0039] on page 7 with the following amended paragraph:

Figure 10 illustrates an embodiment of the present invention that aligns *de novo* sequence (SEQ ID NO:16) to the lactotransferrin protein (SEQ ID NO:17).